



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
(Case No. 00-888-J (236/244))

1641  
RECEIVED  
PATENT  
NOV 04 2003  
TECH CENTER 1600/2900

In the Application of:

Sullenger et al.

Serial No.: 09/165,514

Filing Date: October 2, 1998

For: Alteration of Sequence of a Target  
Molecule

Examiner: Jeffrey Fredman

Group Art Unit: 1641

Commissioner for Patents  
P.O. Box 1450  
Alexandria, Virginia 22313-1450

Sir:

**TRANSMITTAL LETTER**

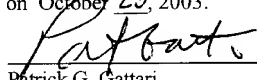
In regard to the above identified application:

1. We are transmitting herewith the attached papers for the above identified new patent application:

- ☒ (Resubmitted) Supplemental Information Disclosure Statement;
- ☒ (Resubmitted) Supplemental Information Disclosure Statement (IDS) PTO-1449 Form;
- ☒ Copies of IDS Citations for S/N 09/165,514 (Total 1 U.S. Patent Application Documents, 3 U.S. patents, and 22 other documents); and
- ☒ Return Receipt Postcard.

2. CERTIFICATE OF MAILING UNDER 37 CFR § 1.8: The undersigned hereby certifies that this Transmittal Letter and the paper, as described in paragraph 1 hereinabove, are being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, PO Box 1450, Alexandria, Virginia 22313-1450 on October 28, 2003.

By :

  
Patrick G. Gattari  
Reg. No. 39,682

McDONNELL BOEHNEN HULBERT & BERGHOFF  
300 SOUTH WACKER DRIVE  
CHICAGO, ILLINOIS 60606  
TELEPHONE (312) 913-0001  
FACSIMILE: (312) 913-0002

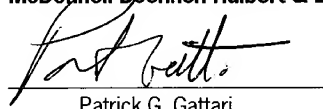


The Supplemental Information Disclosure Statement filed June 17, 2003, included a check in the amount of \$180.00 for filing the Information Disclosure Statement. Accordingly, Applicant's submit that the appropriate fee has been paid. If the Office has a different opinion, please charge any additional fees or credit any overpayment to Deposit Account Number 13-2490. A duplicate of this sheet is enclosed.

Respectfully submitted,

**McDonnell Boehnen Hulbert & Berghoff**

By:

A handwritten signature in black ink, appearing to read "Patrick G. Gattari", is written over a horizontal line.

Patrick G. Gattari  
Reg. No. 39,682

McDonnell Boehnen Hulbert & Berghoff  
300 South Wacker Drive, 32<sup>nd</sup> Floor  
Chicago, IL 60606  
Telephone: 312-913-0001  
Facsimile: 312-913-0002

TECH CENTER 1600/2900

FORM PTO-1449 Commerce (Rev. 2-32)	U. S. Department of Patent and Trademark Office	Atty. Docket No.	Serial No.
 <p style="text-align: center;"><b>SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b></p> <p>(Use several Sheets is Necessary)</p>		00-888-J (236/244)	09/165,514
		Applicant: Sullenger, et al.	
		Filing Date: October 2, 1998	Group: 1634

## U.S. PATENT APPLICATION DOCUMENTS

Examiner Initial		Document Number	Filing Date	Name	Class	Subclass	Publication Date if Appropriate
	1.	08/152,450	11/12/93	Sullenger et al.			

## U.S. PATENT DOCUMENTS

Examiner Initial		Document Number	Date	Name	Class	Subclass	Filing Date if Appropriate
	2.	5,225,337	07/06/93	Robertson			
	3.	5,389,514	02/15/95	Taylor			
	4.	5,869,254	02/09/99	Sullenger			

## OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc).

5.	✓	Been and Cech, "One Binding Site Determines Sequence Specificity of Tetrahymena Pre-rRNA Self-Splicing, Trans-Splicing and RNA Enzyme Activity," <i>Cell</i> 47:207-216 (1986)
6.	✓	Cech, "Ribozyme Engineering," <i>Current Opinion in Structural Biology</i> 2:605-609 (1992)
7.	✓	Dzierzak et al., "Lineage-specific expression of a human $\beta$ -globin gene in murine bone marrow transplant recipients reconstituted with retrovirus-transduced stem cells," <i>Nature</i> , 331, 35-41 (1989)
8.	✓	Inoue et al., "Intermolecular Exon Ligation of the rRNA Precursor of Tetrahymena: Oligonucleotides Can Function as a 5' Exons," <i>Cell</i> 43:431-437 (1985)

EXAMINER	DATE CONSIDERED
----------	-----------------

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449

U. S. Department of Commerce (Rev. 2-32)

U. S. Department of  
Patent and Trademark Office

TECH CENTER 1600/2900

Atty. Dock t No.

Serial N .

00-888-J  
(236/244)

09/165,514

SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT

(Use several Sheets is Necessary)

Applicant: Sullenger, et al.

Filing Date:  
October 2, 1998Group:  
1634

- |     |   |  |
|-----|---|--|
| 9.  | ✓ | Konarska et al., "Trans Splicing of mRNA Precursors in Vitro," <i>Cell</i> 42:165-171 (1985)   |
| 10. | ✓ | Kruger et al., "Self-Splicing RNA: Autoexcision and Autocyclization of the Ribosomal RNA Intervening Sequence of Tetrahymena," <i>Cell</i> 31:147-157 (1982)                             |
| 11. | ✓ | Malim, et al., "functional Dissection of the HIV-1 Rev Trans-Activator - Derivation of a Trans-Dominant Repressor of Rev Function," <i>Cell</i> , 58, 205-214 (1989)                     |
| 12. | ✓ | Morgan and Anderson, "Human Gene Therapy," <i>Annu. Rev. Biochem.</i> 62:191-217 (1993)  |
| 13. | ✓ | Murphy and Cech, "Alteration of Substrate Specificity for the Endoribonucleolytic Cleavage of RNA by the Tetrahymena Ribozyme," <i>Proc. Natl. Acad. Sci. USA</i> 86:9218-9222 (1989)    |
| 14. | ✓ | Price and Cech, "Coupling of Tetrahymena Ribosomal RNA Splicing to $\beta$ -Galactosidase Expression in <i>Escherichia coli</i> ," <i>Science</i> 228:719-722 (1985)                     |
| 15. | ✓ | Price, et al., "Determinants of the 3' splice site for self-splicing of the Tetrahymena pre-rRNA," <i>Genes and Development</i> , 2, 1439-1447 (1988)                                    |
| 16. | ✓ | Sarver et al., "Ribozymes as Potential Anti-HIV-1 Therapeutic Agents" <i>Science</i> 247:1222-1225 (1990)  |
| 17. | ✓ | Smith et al., "Development of a lacZ Marked WEHI-3B D <sup>+</sup> Murine Leukemic Cell Line as an In-Vivo Model fo Actue Non-Lymphocytic Leukemia," <i>Leukemia</i> , 7, 310-317 (1993) |
| 18. | ✓ | Solnick, "Trans Splicing of mRNA Precursors," <i>Cell</i> 42:157-164 (1985)  |
| 19. | ✓ | Sullenger et al., "Overexpression of TAR Sequences Renders Cells Resistant to Human Immunodeficiency Virus Replication," <i>Cell</i> 63:601-608 (1990)                                   |
| 20. | ✓ | Trono et al., "HIV-1 Gag Mutants Can Dominantly Interfere with e Replication of the Wild-Type Virus," <i>Cell</i> , 59, 113-120 (1989)   |
| 21. | ✓ | Tsuchihashi et al., "Protein Enhancement of Hammerhead Ribozyme Catalysis," <i>Science</i> 262:99-102 (1993)   |
| 22. | ✓ | van der Veen et al., "Excised Group II Introns in Yeast Mitochondria are Lariats and Can Be Formed by Self-splicing In Vitro," <i>Cell</i> 44:225-234 (1986)                             |

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.

FORM PTO-1449  
Comm rce (R v. 2-32)

U. S. Departm nt of  
Pat nt and Trademark Office

Atty. Docket No.

Serial No.

00-888-J  
(236/244)

09/165,514

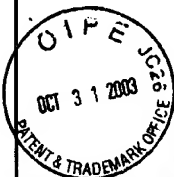
**SUPPLEMENTAL  
INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(Use several Sheets is Necessary)

**Applicant:** Sullenger, et al.

**Filing Date:**  
October 2, 1998

**Group:**  
1634



23.	Waring et al., "The Tetrahymena rRNA Intron Self-Splices in E. Coli: In Vivo Evidence for the Importance of Key Base-Paired Regions of RNA for RNA Enzyme Function," <u>Cell</u> 40:371-380 (1985)
24.	Weber et al., "Antiviral properties of a dominant negative mutant of the herpes simplex virus type 1 regulatory protein ICP0," <u>Journal of General Virology</u> 73:2955-2961 (1992)
25.	Zaug and Cech, "The Intervening Sequence RNA of <i>Tetrahymena</i> Is a Enzyme," <u>Science</u> 231:470-475 (1986)
26.	Zaug et al., "The <i>Tetrahymena</i> Ribozyme Acts Like an RNA Restriction Endonuclease," <u>Nature</u> 324:429-433 (1986)

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication.